



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,909	03/15/2004	William Sears	31132.240	1487
46333	7590	05/27/2009		
Medtronic Attn: Noreen C. Johnson, IP Legal Department 2600 Sofamor Danck Drive Memphis, TN 38132			EXAMINER SCHILLINGER, ANN M	
			ART UNIT 3774	PAPER NUMBER
			MAIL DATE 05/27/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/800,909

Applicant(s)

SEARS ET AL.

Examiner

ANN SCHILLINGER

Art Unit

3774

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-20 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-20 and 27-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4-8, 15, 16, and 27-34 are rejected under 35 U.S.C. 103(a) as unpatentable over Ferree (US Pub. No. 2004/0093082) in view of Stone et al. (US Pat. No. 6,387,130) further in view of Graf (US Pat. No. 6,419,706). Ferree discloses the following of the claimed invention, as shown in Figures 5A-6: a first plate (top element 102) including a concave articulation surface (center indented portion) and a plurality of first recessed surfaces (outer indented portions); a second plate (lower element 102) having a second recessed surface (center indented portion); a convex articulation member ("large central sphere" of Figure 6); and a plurality of motion controlling members (outer, peripheral spheres of Figure 6). Please see paragraphs 0059 and 0061.

Ferree does not teach a flexible elongated member extending through the motion controlling members. Stone et al. teaches a spinal implant with a central elongated member extending through a plurality of motion controlling members as shown in Figures 1 and 5 and in col. 3, line 34 through col. 4, line 28 for the purpose of securely holding the motion controlling members in their desired location. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the device of Ferree by including a flexible elongated member in order to hold the motion controlling members in place.

Ferree, as modified by Stone et al., does not teach the articulation member being made from a stiffer material than the motion controlling members. Graf teaches spinal disc prostheses whose central members (604', 604'') are made from materials having different elastic properties in col. 9, lines 34-51 for the purpose of allowing the prosthesis to properly flex and extend, as the patient requires. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the articulation member of Ferree from a stiffer material than the motion controlling members in order to give the prosthesis its necessary range of motion.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree, in view of Stone et al. and Graf, further in view of Berry (U.S. Pat. No. 5,895,428). Ferree, as modified by Stone et al. and Graf, teaches the invention substantially as claimed, however Ferree does not teach using an amorphous oxide coating on the implant's plates. Berry teaches using an amorphous oxide coating on a spinal implant's plates. Berry teaches this in col. 10, lines 38-42 and 56-57 for the purpose of decreasing the frictional wear on the implant over time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ferree, Graf, and Stone et al. by using this type of coating to prevent the implant from being damaged by friction.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree, in view of Stone et al. and Graf, further in view of Buttner-Janz et al. (U.S. Pat. No. 5,401,269). Ferree, as modified by Stone et al. and Graf, teaches the invention substantially as claimed, however Ferree does not teach having a projection on the articulation member. Buttner-Janz et al. teaches a vertebral body prosthesis with a projection in col. 3, line 63 through col. 4, line 37 for the

purpose of controlling the movement of the articulation member. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ferree, Graf and Stone et al. by using a projection on the articulation member in order to control the articulation member's movement.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree, in view of Stone et al. and Graf, further in view of Michelson (U.S. Pat. No. 6,350,283). Ferree, as modified by Stone et al. and Graf, teaches the invention substantially as claimed, however Ferree does not teach using a bio-resorbable material on the elastic members. Michelson teaches a spinal implant using a bio-resorbable material on the elastic members in col. 2, lines 47-67 for the purpose of allowing those implant parts to be biologically replaced in the body over time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ferree, Graf, and Stone et al. by using a bio-resorbable material on the elastic members in order to allow those implant parts to be biologically replaced in the body over time.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree, in view of Stone et al. and Graf, further in view of Rabbe et al. (U.S. Pat. No. 5776197). Ferree, as modified by Stone et al. and Graf, teaches the invention substantially as claimed, however Ferree does not teach having hollow portions in the implant. Rabbe et al. teaches a vertebral prosthesis using hollow portions in col. 3, lines 40-50 for the purpose of allowing bone ingrowth. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ferree, Graf and Stone et al. by including hollow portions in order to allow bone ingrowth.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree, in view of Stone et al. and Graf, further in view of Ray et al. (U.S. Pat. No. 4,772,287). Ferree, as modified by Stone et al. and Graf, teaches the invention substantially as claimed, however Ferree does not teach using gel in the elastic members. Ray et al. teaches a spinal disc implant using gel in the elastic members in col. 3, lines 8-17 because gel has inherent properties that mimic the natural movement of intradiscal nuclear tissue. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ferree, Graf, and Stone et al. by using gel in the elastic members of the implant because their viscosity and velocity-shear behavior matches that of the intradiscal nuclear tissue.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferree, in view of Stone et al. and Graf, further in view of Bryan et al. (U.S. Pat. No. 6,156,067). Ferree, as modified by Stone et al. and Graf, teaches the invention substantially as claimed, however Ferree does not teach the elastic members have a sphere or wheel shape. Bryan et al. teaches a spinal prosthesis with sphere and wheel shaped elastic members in col. 3, line 62 through col. 4, line 57 for the purpose of allowing the prosthesis to have a greater range of movement. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ferree, Graf, and Stone et al. by using wheel or sphere shaped elastic members in order to give the prosthesis a greater range of motion.

Response to Arguments

Applicant's arguments with respect to claims 1, 2, 4-10, 14-20, and 28-34 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claim 27, the Applicant contends that the Ferree reference does not disclose a convex articulation portion on the superior surface of the first plate. The examiner respectfully disagrees. Figure 6 of the Ferree reference shows a circular end plate, whose upper portion constitutes a "convex articulation surface portion," thus meeting the claims' limitations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANN SCHILLINGER whose telephone number is (571)272-6652. The examiner can normally be reached on Mon. thru Fri. 9 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on (571) 272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/800,909

Page 7

Art Unit: 3774

/DAVID ISABELLA/

Supervisory Patent Examiner, Art Unit 3774